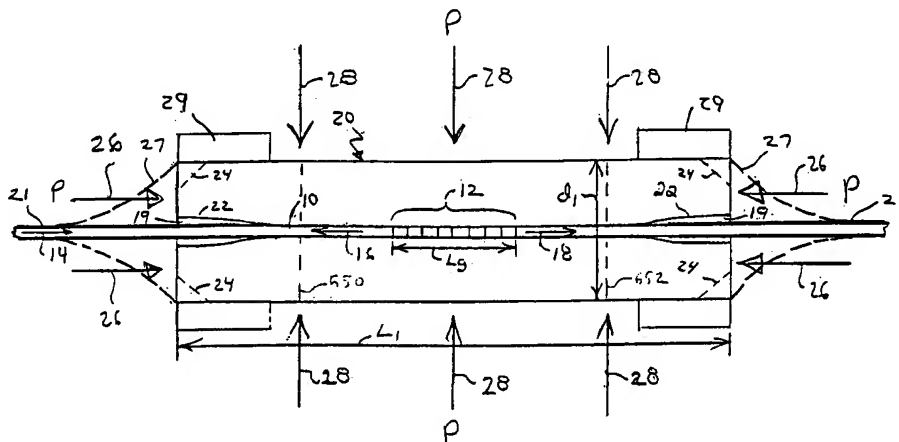




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(21) International Application Number: PCT/US99/28868 (22) International Filing Date: 6 December 1999 (06.12.99) (30) Priority Data: 09/205,944 4 December 1998 (04.12.98) US 09/399,404 20 September 1999 (20.09.99) US Not furnished 6 December 1999 (06.12.99) US (71) Applicant: CiDRA CORPORATION [US/US]; 50 Barnes Park North, Wallingford, CT 06492 (US).		(72) Inventors: FERNALD, Mark, R.; 35 Tyler Road, Enfield, CT 06082 (US). BAILEY, Timothy, J.; 703 Maple Road, Longmeadow, MA 01106 (US). MILLER, Matthew, B.; 104 Deerfield Drive, Glastonbury, CT 06033 (US). SULLIVAN, James, M.; 465 Buckland Hills Drive, Manchester, CT 06118 (US). DUNPHY, James, R.; 21 Hickory Drive, Glastonbury, CT 06033 (US). DAVIS, Michael, A.; 172 Stevens Lane, Glastonbury, CT 06033 (US). KERSEY, Alan, D.; 75 Taylor Town Road, South Glastonbury, CT 06073 (US). WRIGHT, Christopher, J.; 54 Crouch Road, Amston, CT 06231 (US). PUTNAM, Martin, A.; 78 Lancaster Way, Cheshire, CT 06410 (US). BRUCATO, Robert, N.; 268-1 Scott Road, Waterbury, CT 06705 (US). SANDERS, Paul, E.; 1 Centre Village, Madison, CT 06443 (US). (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> (88) Date of publication of the international search report: 26 October 2000 (26.10.00)

(54) Title: BRAGG GRATING PRESSURE SENSOR**(57) Abstract**

A fiber grating pressure sensor includes an optical sensing element (20, 600) which includes an optical fiber (10) having a Bragg grating (12) impressed therein which is encased within and fused to at least a portion of a glass capillary tube (20) and/or a large diameter waveguide grating (600) having a core and a wide cladding and which has an outer transverse dimension of at least 0.3 mm. Light (14) is incident on the grating (12) and light (16) is reflected from the grating (12) at a reflection wavelength λ_1 . The sensing element (20, 600) may be used by itself as a sensor or located within a housing (48, 60, 90, 270, 300). When external pressure P increases, the grating (12) is compressed and the reflection wavelength λ_1 changes.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/28868

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G01L11/02 G01L1/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	WO 95 30926 A (UNIV SYDNEY ;HILL PETER (AU); ATKINS GRAHAM (AU); SCEATS MARK (AU)) 16 November 1995 (1995-11-16)	1-21,25, 26, 32-49, 53,54, 60,61
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INTERNATIONAL SEARCH REPORT

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PCT/US 99/28868

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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